

Measures of Transgender Behavior

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Using factor analysis, we sought to identify the components of transgenderism. Subjects were 455 transvestites and 61 male-to-female transsexuals, all biological males. A 70-item questionnaire was used, along with other structured questions concerning preferred and usual sex partners. Five factors were identified and interpreted: Transgender Identity, Role, Sexual Arousal, Androallure, and Pleasure. These factors represent the most salient dimensions of transgenderism. All five-factor Means for transvestites and transsexuals differ. An examination of overlap of group distributions for each factor showed such overlap to range from only 6% for Identity to 46% for both Androallure and Pleasure. Factor intercorrelations for the obliquely rotated factors ranged from $-.37$ to $.27$. While transvestites and transsexuals have different lifestyles, their transgender cognition and behavior seem constructed upon different combinations of the same variables. A second-order analysis of these five factors yielded two factors: Sexual Arousal loaded highest on the first factor (.91), and for the second the highest loading variable was Androallure (.57). Each of these highlights the primary importance of sexual arousal in transgender cognition and behavior. Studying possible age effects, we found that the younger versus older transvestite groups had significantly different scale Means for Androallure and Pleasure; there were no age differences between older and younger transsexuals on any of the five scales. Six percent of transvestites reported a male as their usual sex partner; 25% of the transsexuals reported a female as their usual sex partner. For each group, one-third indicated their usual sex practice was without any partner, while only 5% said they preferred this practice. We propose that the five variables identified offer a comprehensive approach to the description of individual differences in transgender experience and expression.

KEY WORDS: autogynephilia; cross-dressing; gender dysphoria; gender identity; secondary transsexual; transgender; transsexual; transvestism.

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INTRODUCTION

The major diagnostic features of both transvestism and transsexualism have been agreed upon for at least a half-century. Transsexuals typically report a long-standing, intense experience of gender discordance—that is, of being cast into the wrong body relative to one's gender identity. The major feature of transvestism is periodic cross-dressing for the purpose of sexual arousal, in a heterosexual male (American Psychiatric Association [APA], 1994). We have no argument with these broad diagnostic descriptions which reflect the typological tradition of the medical model; no doubt they serve useful purposes. However, our research has not been concerned with diagnostic classification or typological issues; we are interested in the variables which may be the elements of transgender cognition and behavior. To us, it is imperative to put aside diagnostic classifications and concentrate on the component parts of transgenderism, for in both transsexuals and transvestites, there are abundant examples of individuals whose gender identity, gender-role behavior, and sexual history do not fit neatly into the framework of diagnostic categories. For example, there are scores of well-documented cases of men who have functioned for decades as unremarkable transvestites, often renouncing feelings of intense gender discordance, who ultimately come to live permanently as women, with or without sex reassignment surgery. Such individuals have been labelled secondary transsexuals, since an extensive period of alternative behavior (e.g., transvestism) preceeded a full-time gender change (Person and Ovesey, 1974). Additionally, among transvestites, there are marked individual differences in gender identity, gender-role behavior, and in the significance of sexual reinforcers across the lifespan; these differences have not been adequately documented or measured, and much of what is known is based on personal histories and case reports. Hence, the development of assessment tools is a vital research priority. The three parameters noted above are important examples, but they are not the only variables calling for additional study.

Sexual orientation has also long been considered a variable of importance in both transsexuals and transvestites, and for transsexuals, research supports a bifurcation into homosexual and heterosexual subgroups (Blanchard, 1985). We shall attempt to explore this by asking our subjects about both their preferred sex partner, if any, and also their usual sex partner. Concerning the sexual preferences of transvestites, there is convincing data showing that at least 87% characterize themselves as heterosexual (Docter and Prince, 1997; Prince and Bentler, 1972). But despite this generalization, our own clinical experience has included many cases in which married, heterosexual transvestites report both intense fantasy and behavior, when cross-dressed, involving erotic interpersonal exchanges with men. Using a large sample of transvestites, we shall attempt to clarify this. Finally, little has been published concerning the impact of age upon transgender

experience; we shall describe what we have found concerning the possible effects of aging.

We have previously reviewed the assessment of transgender behavior from several perspectives (Docter and Fleming, 1992). Virtually all descriptions of such behavior, spanning transvestism and transsexualism, have recognized some overlap between these syndromes, especially concerning cross-gender identity (Benjamin, 1966; Ettner, 1999; Stoller, 1968, 1974). However, the factorial structure of the construct of transgenderism has not been adequately explored. One exception is the extensive series of reports by Blanchard and associates (e.g., Blanchard, 1985, 1989; Blanchard and Clemmenson, 1988). Of particular interest is Blanchard's study of *autogynephilia*—the propensity to become sexually aroused by the thought or image of oneself as a woman. Using factor analysis and a small number of questionnaire items, he found that three autogynephilic subgroups could be identified in nonhomosexual gender-dysphoric men, all having the same “underlying disorder” of gender dysphoria, and all seeking sex reassignment as women. A key point is Blanchard's finding that in these nonhomosexual men, sexual arousal was a major component both motivating cross-gender cognition and behavior, and providing powerful reinforcement for gender-deviant behavior. But unlike the present study, Blanchard was working with clinical intake questionnaire data that was not designed to explore other variables of greatest concern to us; he was mainly interested in formulating a typology for homosexual and non-homosexual transsexuals, and in issues bearing on the clinical histories of these groups.

In our 1992 report, we described four moderately correlated factors derived from the factor analysis of a 113-item transgender questionnaire, and we proposed that the identified factors were important components of transgenderism. These variables were identified as: Cross-Dressing Identity, Feminization of the Body, Sexual Arousal, and Social/Sexual Role. These factors were based on both exploratory and validation factor analyses. The present report is an extension of this earlier research.

Summarizing, we sought to answer these questions

- (a) What is the factorial structure of transgender behavior and cognition?
- (b) Is there one or more higher order, overriding factor of transgenderism or gender dysphoria?
- (c) What dimensions of transgenderism may differentiate most clearly between transvestites and transsexuals?
- (d) What are the similarities which characterize transvestites and transsexuals?
- (e) What may be learned concerning both sexual partner preference and typical sexual behavior among transvestites and transsexuals?
- (f) Does age play a part in transgender behavior?

METHOD

Questionnaire

A self-report questionnaire composed of 178 items was used to assess various beliefs and behaviors considered important in transvestism and transsexualism. The items were based on published descriptions of these transvestites and transsexuals, autobiographical reports, the suggestions of transvestites and transsexuals who were asked to critique earlier versions, and our own clinical experience. In the first phase of this project we used a 75-item questionnaire (Dokter, 1988). This was expanded to a 113-item version (Dokter and Fleming, 1992), which yielded four factors. Finally, we added 65 new items to our 113-item version to produce a questionnaire of 178 items. An exploratory factor analysis was then carried using 395 transgendered subjects, and the selection of the final 70 items was based on those items having loadings of at least .40, using a five-factor solution. It was this 70-item questionnaire which was used for the present factor analysis.

Subjects

Subjects were 516 biological males. They were self-described transvestites (88%) and transsexuals (12%), recruited as unpaid volunteers at several transgender conventions and through support groups in the United States and Canada. Our transvestite group was composed of periodic cross-dressers who dress fully as women; partial cross-dressers, that is, those who did not dress fully as women, were excluded. Our transsexual sample stated they were living continuously and permanently in the feminine gender role, with or without so-called sex reassignment surgery. Among the transsexual subgroup, 51% reported having received some form of sex reassignment surgery. Twenty-two percent of our subjects reported having participated in our earlier research; none had any clinical relationship with the researchers. The questionnaires provided for either anonymous responding, which was elected by fewer than 5%, or with an address. When an address was given, we provided a feedback report containing a subject's scale scores, together with interpretive information.

Demographic and Identifying Data

The Mean age for transvestites was 45 (SD 11) with a range from 19 to 78 years; for transsexuals the Mean age was 44 (SD 10) with a range from 25 to 70 years. Eighty-two percent of the transvestites had married (transsexuals, 71%), and 45% of those who had married were currently living with their wives (transsexuals, 9%). Thirty-one percent of the transvestites had divorced (transsexuals, 58%), 6% were separated but not divorced (transsexuals, 4%).

All subjects were high school graduates, and 89% of both the transvestite and transsexual subgroups had attended at least one semester of college. Of those attending college, 90% indicated they had earned at least one academic degree, as follows: Associate in Arts, 19%, B.A. or B.S., 44%, M.A., 26%, and doctoral level, 11%. The B.A. degree was earned by 38% of the transvestites and 26% of the transsexuals. Ethnicity was distributed as follows: Caucasian, 90%, Afro-American, 5%, Hispanic, 4%, and Asian, 1%. Employment status was reported to be as follows: employed full-time, 84%, part-time, 3%, retired, 12%, and unemployed, 1%. The two subgroups were very similar in employment status. Geographically, the subjects were from all parts of the United States but most came from either the midwestern states (44%) or the western states (21%), with New England, the south, and the eastern seaboard underrepresented. This uneven sampling was due mainly to the location of transgender conventions and support groups from which participants were recruited. Seventy-one percent of our subjects had fathered at least one child. All except 12% were currently members of at least one transgender support or advocacy organization. Sixty-one percent said they had not participated in any prior version of this research, while 22% indicated they had done so; the remaining 17% were unsure. We also inquired about the attire worn by our subjects while they were completing the questionnaire: 63% said they were “dressed as a woman . . .,” 27% “. . . as a man . . .,” and 10% in mixed-gender attire.

Probable Sampling Biases

Most of our subjects were better educated than the general population, and a high percentage had attended college and had received academic degrees. Taken as a whole, these individuals were better off socioeconomically than a hypothetical national sample of transgendered individuals. Such a sample would range from unemployed street persons to affluent professionals. Another source of bias was that all of our subjects volunteered to assist in this research. This self-selection probably contributed to the production of a sample which is well educated, has strong socioeconomic status, and is free of major mental health problems. Another source of bias may be that many transsexuals choose not to affiliate with support organizations similar to the ones from which our transsexuals were recruited; hence, they are not represented in this sample.

Self-Description of Transgender Behavior

Together with various identifying data, each subject responded to questions describing his/her transgender behavior. All transvestites described themselves as dressing fully as a woman and of doing so in sessions lasting several hours. Most transvestites said they did so a few times each month, while others ranged from

daily cross dressing to a few times per year. The transsexuals all stated they were living entirely in the cross-gender role without reversion to the masculine gender role.

RESULTS

Exploratory Factor Analysis

A tetrachoric correlation matrix was formed using the 70 dichotomously scored questionnaire items. This matrix was factor analyzed using the principal factors method and the BMDP 4th program (Dixon, 1985). A scree test (Cattell, 1966) was employed. From an examination of the plot of the largest eigenvalues, the correct number of factors appeared to be four, five, or six. Each of these was then used in a factor analysis using an oblique rotation (direct quatimax). The solution found to be most interpretable was for five factors. A factor loading of .40 was used as the cut-off for item identification in composing each of the five scales.

Initial Eigenvalues Prior to Rotation

Prior to rotation, the initial eigenvalues, and the percent of variance explained were: Factor I: 29.9 (26.6% variance explained). Factor II: 1.77 (7.8%). Factor III: 1.0 (5.3%). Factor IV: .74 (3.5%). Factor V: .56 (1.9%). The total variance explained prior to rotation was: 45.1%.

Five Factors

The intercorrelation matrix for the five factors which were the product of our analysis is shown in Table I.

Factor Scales and Interpretation

Scale scores are the summation of questionnaire items comprising each factor. Our interpretation of the factors is based upon item content. The questionnaire

Table I. Intercorrelations for Five Rotated Factors

| Factor | I | II | III | IV |
|--------|------|------|-----|-----|
| I | | | | |
| II | .27 | | | |
| III | -.37 | -.28 | | |
| IV | .20 | .14 | .07 | |
| V | .03 | .17 | .23 | .00 |

Table II. Means, Standard Deviations, and *t* Tests Comparing Transvestites and Transsexuals on Five Scales

| Factor | Transvestites <i>N</i> = 455 | | Transsexuals <i>N</i> = 61 | | <i>t</i> test | <i>p</i> |
|--------------------|------------------------------|-----|----------------------------|-----|---------------|----------|
| | Mean | SD | Mean | SD | | |
| I Identity | 12.2 | 7.8 | 20.9 | 3.3 | 8.5 | <.0001 |
| II Role | 4.8 | 4.1 | 14.7 | 3.1 | 3.2 | <.0001 |
| III Sexual arousal | 5.5 | 3.2 | 2.0 | 2.4 | 10.1 | <.0001 |
| IV Androallure | 3.6 | 2.8 | 5.5 | 2.5 | 6.1 | <.0001 |
| V Pleasure | 6.2 | 1.9 | 4.8 | 2.5 | 6.0 | <.0001 |

items for the five factors are given below in an abbreviated form, together with our rationale for factor interpretation.

Factor I: Transgender Identity

This factor is comprised of 26 questionnaire items. For 516 subjects, the Mean was 13.3 (SD 7.9). Group Means are presented in Table II. This factor is interpreted as a measure of one’s self-perceived transgender identity—that is, one’s own view of himself/herself relative to masculine or feminine characteristics. Subjects having the higher scores on this factor not only perceive themselves as strongly feminine, but typically report an intense motivation to live entirely in the role of a woman through a permanent change in gender status—that is, a transsexual lifestyle. There is rejection of masculine gender attributes and a desire for both gender-role changes and surgical alteration consistent with becoming a male-to-female transsexual. This scale taps the private, subjective, and experiential attributes of one’s gender experience. Since this scale is measuring cognitions about one’s self, overt cross gender conduct is not being assessed; the focus is upon transgender identity. Low scores for this factor indicate greater congruity between one’s biological sex and one’s gender identity. The following items constitute Factor I. Item wording has been abbreviated where necessary.

| Item content | Loading |
|---|---------|
| Would choose to live as a woman | .92 |
| I wish I had been born a woman | .86 |
| I am a woman in a man’s body | .84 |
| I’d prefer to live as a full-time woman | .83 |
| I would like to get rid of my male sex organs | .80 |
| Would be happier if born a woman | .79 |
| I always wished to be a woman | .79 |
| My true gender is feminine | .77 |

| | |
|--|-----|
| Wished I could have the internal organs of a woman | .77 |
| The "real me" is a woman | .76 |
| I have received over 10 hours of electrolysis | .75 |
| Believe I am a "true transsexual" | .75 |
| I do not enjoy functioning as a man | .73 |
| I think of my feminine name as my real name | .72 |
| I am certain I am moving toward transsexualism | .72 |
| I seldom want to wear men's clothes | .71 |
| I have always felt more like a woman than a man | .71 |
| I consider myself to be a transsexual | .68 |
| I shall someday (or I did) apply for sex reassignment | .64 |
| Masculine identity is weaker than my feminine identity | .64 |
| At some time, I shall (or do) live entirely as woman | .64 |
| As a woman, I am expressing my "true self" | .60 |
| I daydream of being a woman at least once per day | .60 |
| Wished I could become pregnant | .54 |
| I have spoken with an M.D. about taking estrogen | .52 |
| I daydream of being a woman at least ten times per day | .48 |

Factor II: Transgender Role

This factor is composed of 18 items. For 516 subjects, the Mean was 6.0 (SD 5.2). This factor measures actual transgender role behavior. The most heavily loaded items describe various social behaviors. High scores on this factor indicate extensive actual transgender role conduct; low scores are indicative of infrequency or absence of such behavior.

| Item content | Loading |
|---|------------------|
| I attend entertainment events in my feminine role | .87 |
| I eat in restaurants in my feminine role | .85 |
| I often shop appearing as a woman | .81 |
| I have travelled by airplane in my feminine role | .79 |
| I have a driver's license with my femme picture | .78 |
| I am able to "pass" as a woman in public places | .74 |
| My feminine name is now my legal name | .68 ^a |
| I have checked into hotels or motels as a woman | .67 |
| I have taken train trips . . . public transportation as a woman | .66 |
| I have taken all-day auto . . . bus trips as a woman | .63 |
| In feminine role, men have bought me drinks | .61 ^b |
| I have been a student . . . as a woman | .60 |

| | |
|---|------------------|
| Developed passable style of speaking as a woman | .58 |
| Relatives and friends know of my feminine identity | .56 |
| I have taken female hormones regularly | .56 |
| I have attended "straight" business meetings as a woman | .54 |
| In feminine role, I have danced with a man | .50 ^b |
| Discussed with an M.D. possible cosmetic surgery | .44 |

^a Also loads on Factor V.

^b Also loads on Factor IV.

Factor III: Transgender Sexual Arousal

This factor is composed of eleven items. For 516 subjects the Mean was 5.1 (SD 3.4). Nearly all of the items for this factor are based on the association of transgender behavior and the experience of sexual arousal, which is one of the best established generalities concerning transvestites. High scores on this factor are associated with a strong relationship between transgender behavior and sexual arousal, while low scores indicate the opposite.

| Item content | Loading |
|--|------------------|
| Wearing beautiful lingerie usually gives me sexual excitement | .72 |
| Using beautiful makeup will make me sexually excited | .67 |
| Some clothing is especially sexually arousing | .64 |
| Wearing beautiful clothes brings greater sexual pleasure | .57 |
| Become sexually excited because of my feminine appearance | .56 |
| Feminine clothing (etc.) helps me have an orgasm | .55 |
| I prefer to wear sexy hosiery and high heels | .52 |
| I become sexually excited when dressing as a woman | .52 |
| Reading of men becoming women makes me sexually excited | .51 |
| When I'm tired, wearing feminine clothing will "perk" me up | .44 ^a |
| Wearing a garterbelt and stockings is more sexy than pantyhose | .44 |

^a Also loads on Factor V.

Factor IV: Androallure

This factor is composed of nine items. For 516 subjects the Mean was 3.9 (SD 2.8). We have used the term *androallure* because seven of the nine items for this factor deal with sexual, affectionate, or social encounters between a transgendered (biologically male) person and another male. A single item pertains to sexual arousal with a woman, and one deals with sexual arousal to persons of either sex.

None of these items is explicitly phrased to assess a history of sexual preference. High scores indicate intensity of erotic attraction or affectionate or sexual expression, between a transgendered person and a male, and low scores indicate a relative absence of such encounters. This is not a measure of preferred sex partner.

| Item content | Loading |
|---|------------------|
| When in the feminine role . . . attracted to both men and women | .76 |
| When I'm wearing a sexy dress, I am more attracted to men | .73 |
| In the feminine role, I've been kissed by a man | .69 |
| In the feminine role, I have had a sexual encounter with a man | .69 |
| While feminine . . . had sex encounter beyond kissing a man | .68 |
| In the feminine role, I'm exclusively attracted to women | .68 |
| Have a fantasy that I'm having sex with a man | .66 |
| In the feminine role, I have danced with a man | .49 ^a |
| In the feminine role, men have bought me drinks | .42 ^a |

^aAlso loads on Factor II.

Factor V: Pleasure

This factor is comprised of nine items. For 516 subjects the Mean was 5.2 (SD 2.0). High scores on this factor are associated with nonsexual enjoyment, relaxation, feeling "perked up," and joyful delight through transgender experience. Low scores are not associated with negative experience, but simply with less transgender pleasure.

| Item content | Loading |
|---|------------------|
| Being in the feminine role is more pleasurable than masculine | .72 |
| Being in the feminine role is a super-pleasure for me | .62 |
| I eat in restaurants in my feminine role | .59 |
| Enjoy seeing pictures of myself in the feminine role | .57 |
| Wearing feminine clothes makes me more "alive" or energetic | .53 |
| Wearing something feminine will help when I feel "down" | .46 |
| Feminine role makes it easier to express emotions | .43 |
| My feminine name is now my legal name | .41 ^a |
| When I'm tired, wearing feminine clothing will "perk" me up | .40 ^b |

^aAlso loads on Factor II.

^bAlso loads on Factor III.

Scale Differences: Transvestites versus Transsexuals

Transvestites and transsexuals were found to have significantly different Mean scores across the five scales, as shown in Table II.

Overlapping Scores for Transvestites and Transsexuals

Many transvestites have scale scores overlapping those of even the highest transsexuals, and vice versa. To examine this more closely, we established a cutoff score at the 67th percentile of whichever group scored highest on each of the five factors; we then defined overlap as the percentage of the second group scoring above this cutoff. Transvestites overlapped the higher-scoring transsexuals as follows: Factor I, 6%; Factor II, 19%; Factor IV, 46%. Transsexuals overlapped the higher scoring transvestites as follows: Factor III, 18%, and Factor V, 46%.

Absence of Age Effect

The transvestite and transsexual groups were independently divided into younger and older subgroups using the median as a division point. Using the *t* test, we found no significant differences between older and younger transsexuals for any of the five scales. For the transvestites, there were significant differences ($p < .002$) for Factors IV and V. The younger transvestites obtained the higher scores for Androallure, while the older transvestites earned the higher scores for Pleasure. We also obtained Pearson product moment correlation coefficients between scale score and age for each of the groups and for each of the five variables; none of these correlations exceeded .30. Taken as a whole, our conclusion is that age effects may play a slight role in the determination of two variables for transvestites, and that age is unrelated to the scale scores of transsexuals.

Preferred Sex Partners

Our subjects were asked "With whom have you most strongly preferred to have sex during your adult life?" A separate question asked "Regardless of your preference, with whom have you usually had sex?" The results are presented in Table III.

Second-Order Factor Analysis

As an exploration, a second-order factor analysis was carried out based on the intercorrelation matrix for the five factors described above. The same previously

Table III. Preferred and Usual Sex Partner

| | Transvestites <i>N</i> = 455 | | Transsexuals <i>N</i> = 58 | |
|-----------------------|------------------------------|--------------|----------------------------|--------------|
| | Preferred | Usual | Preferred | Usual |
| Adult female (%) | 69 | 53 | 47 | 40 |
| Adult male (%) | 7 | 6 | 19 | 21 |
| Equally preferred (%) | 10 | ^a | 17 | ^a |
| No partner (%) | 5 | 34 | 4 | 27 |
| None apply (%) | 9 | 7 | 13 | 12 |

^aFor Usual partner, this response option was not provided.

described analytic procedures were employed, including oblique rotation. Two factors emerged and the loadings upon these factors are shown in Table IV. The original factor of Sexual Arousal was most heavily loaded on Factor I. The pattern of loadings for the other three original factors supports the interpretation of this as a Transvestic Autogynephilia factor—that is, experiencing sexual arousal in association with the thought or image of oneself as a woman. For secondary Factor II, the highest loading (.57) was the primary factor of Androallure with moderate positive loadings for Identity and Role factors, and a very low loading (.17) for Sexual Arousal. We have named this factor Autogynephilic Pseudobisexuality.

DISCUSSION

Our results offer evidence for a five-factor model of transgenderism. These variables may help to clarify the structural dimensions of transvestism and transsexualism. The parameters considered here offer an alternative to the diagnostic or typological approach; at the least, they may help to refine such an approach. The scales we have developed are each more extensive than previously published measures of these variables.

While transvestites and transsexuals live quite different gender lifestyles, their transgender experiences and erotic motives have many similarities. For example, 6% of our transvestites described feelings of very intense feminine gender

Table IV. Factor Loadings for Two Secondary Factors

| Factor | Secondary Factor I | Secondary Factor II |
|--------------------|----------------------------|----------------------------------|
| | Transvestic Autogynephilia | Autogynephilic Pseudobisexuality |
| I Identity | -.40 | .34 |
| II Role | -.35 | .25 |
| III Sexual arousal | .91 | .17 |
| IV Androallure | .09 | .57 |
| V Pleasure | .29 | .03 |

Note. The correlation between the two secondary factors was -.20.

identity overlapping with the scale scores of most transsexuals. This is a confirmation of Blanchard's finding (1989) that his three nonhomosexual *autogynephilic* subgroups showed less intense transgender identity than did his homosexual transsexuals.

Many of our transsexuals reported sexual arousal associated with transgender ideation and behavior akin to what most transvestites said they experienced. This is also directly in line with Blanchard's 1989 study. In an earlier report, Blanchard and Clemmensen (1988), found that in nonhomosexual transsexuals sexual arousal to transgender stimuli inversely covaried with gender dysphoria ($r = -.56$), and they noted that this sexual arousal is "relatively common" among heterosexual transsexuals (p. 430).

Our findings do not support the model of a single over-arching construct, such as the gender dysphoria explanation for transsexualism. This simplification offers a one dimensional focus on what we see as highly complex, multidimensional cognition and behavior of the transsexual. Reliance upon a single construct, in our view, is simplistic. The same logic applies to the continuing oversimplification of transvestism, which is too often said to be little more than cross-dressing for the purpose of sexual arousal, while giving scant attention to other variables which play a part. While sexual reinforcers are almost invariably described in the history of the transvestite, the other variables highlighted here—Identity, Role, Pleasure and Androallure—are also important sources of reinforcement for most transvestites.

Differences Between Group Means

The scale score Means for transvestites and transsexuals differ significantly across the five variables, as shown in Table II. Since there are great differences in gender behavior of transvestites and transsexuals, these differences in scale score Means offer some support for the construct validity of our measures. Transsexuals scored highest for Factors I (Identity), Factor II (Role) and Factor IV (Androallure), which is what we had expected based on our earlier research (Doeber and Fleming, 1992), while the transvestites scored the higher Means for Factor III (Sexual Arousal) and Factor V (Pleasure), which was also expected. While there is no surprise in these Mean differences, what is surprising is the extent of overlap in scale scores shared by the two groups.

Group Similarities in Scale Scores

Overlap between the two groups was defined as that percentage of the group having the lower Mean scale score which exceeded the 67th percentile of the group having the higher Mean for a given variable. For all five factors, we found some overlap, ranging from a low on Factor I (Identity) of only 6%, to a high of 46% for

Factors IV (Androallure) and V (Pleasure). Nineteen percent of the transvestites reported cross gender role behaviors (Factor II) overlapping with the highest two-thirds of our transsexuals. These individuals said they behaved in transgender roles much as did the transsexuals, through participation in a variety of public events. At present, we do not know if such experience, perhaps combined with a high transgender identity, may be predictive of secondary transsexualism, but it is in line with the description of so-called marginal transvestites (Buhrich and McConaghy, 1977) considered more likely to opt for a transsexual lifestyle.

While transsexuals often report little or no sexual arousal associated with their feminine expression of gender, we found 18% of this group exceeded the 67th percentile of the transvestite group. The distribution of Sexual Arousal scores for transsexuals were very negatively skewed, while for the transvestites, these scale scores were very evenly distributed. Only 15% of the transvestites described themselves as experiencing no sexual arousal associated with cross-dressing, while 75% of the transsexuals so stated. For scales I, II, and III, the amount of group overlap never exceeds 19%. In contrast, 46% of the transvestites exceeded the 67th percentile of the transsexual group on Factor IV (Androallure). High scale scores on Factor IV should not be interpreted as indicative of a homosexual preference, although many Androallure items deal with affectional, social, or sexual encounters between a transgendered person and a male. While affectional encounters with men are not rare in transvestites, the topic is seldom openly discussed in either their support-group meetings or in transvestite publications. Our cultural discomfort with gay-like behavior may play a part here. Perhaps the confidentiality and anonymity of our survey facilitated greater Androallure-type disclosures among our transvestite subjects. Finally, we found a 46% overlap of transsexuals for Factor V (Pleasure). Perhaps the only surprise here is that we did not have even more transsexuals reporting a special sense of elation, delight, relief from stress, and exhilaration associated with their transgender experience. Our interpretation of this is that many transsexuals do not experience anything emotionally unique about their change in gender; their transsexual lifestyle may simply be part of the ups and downs of life. In contrast, the transvestites report their periodic cross-dressing episodes as uniquely pleasurable. Together with sexual reinforcers, the positive affective experiences described by our Pleasure variable constitute the most important reinforcers associated with their cross-dressing.

Absence of Age Effect

There is considerable reference in the literature concerning transvestites who, over the course of their lives, report lessening of the sexual significance of cross-dressing (e.g., Brierley, 1979). We did not find such an age effect for our younger versus older transvestites when the Means for Sexual Arousal were compared. Our scale scores reflect significant Means differences for transvestites only for

Androallure—wherein the younger men obtain higher scale scores, and Pleasure—wherein the older transvestites obtain the higher scores. While the age Means for these two scales differed, none of the correlations between scale scores and age exceeded .30 or $-.30$. This was also true for the transsexuals, who did not show any significant differences contrasting younger and older subjects for any of the five variables. Hence, except for the two-scale differences for transvestites, age does not appear to play a part relative to these variables.

Preferred and Usual Sex Partner

For both groups there are some substantial differences between the declared preference of sex partner and the usual sex partner. About 30% of each group reported usually having solitary sex, while for both groups, only about 5% said they would prefer this. For the transvestites, 69% reported preferring a female partner, but this was the usual sex partner for only 53% of this group. While most transvestites are self-described heterosexuals, 6% reported a preference for a male sex partner, and 7% reported a male to be their usual sex partner. Very little is known about this homosexually or bisexually inclined subgroup of periodic cross-dressers. The 9% of transvestites who said that none of the response options applied to them gave a variety of reasons, such as medical complications, lack of interest, effect of medication, and lack of opportunity or experience. A surprising 47% of our transsexual subjects reported preferring a female sex partner, and 40% said this was their usual partner. Only 19% said they preferred a male partner, while 17% indicated a bisexual preference. This sample of transsexuals seems far more heterosexually inclined than we had expected. Perhaps our sample of transsexuals was overrepresented by the older, so-called secondary transsexuals who often have a heterosexual history. Those transsexuals who are usually having sex alone (27%) represent more than six times the percentage who indicate this as their preference (4%).

Factor Intercorrelations

The intercorrelations among the five factors for the combined groups, following rotation, ranged from $-.37$ to $.27$, indicating that these variables are largely, but not entirely, independent. The inverse relationship of $-.37$ between Identity and Sexual Arousal was previously reported by Blanchard and Clemmensen (1988). The transsexual group, which scored higher on our Identity scale, typically scored lower on Sexual Arousal. Conversely, the transvestite group, which scored lower on the Identity factor are far more likely to report greater sexual arousal. The same relationship between scales is shown by the $-.28$ correlation between Role and Sexual Arousal, taking both groups as a whole. But it is less clear why a correlation of only $.27$ would be seen between Identity and Role. At first glance, one would expect that

the more intense one's transgender identity, the more extensive would be the transgender role, and that a substantial positive correlation would be seen. But this is not the case. For transvestites, the correlation was .32, and for transsexuals, $-.13$; Transgender Identity and Role share little variance for the transvestites and none for transsexuals. It is also of interest to note that only about 5% of the variance of Sexual Arousal is shared with Pleasure. These factors seem to be tapping two different domains of affective experience, the former highly sexual, and the other spanning positive but nonsexual affective experience. While much attention has been given to the reinforcing value of sexual arousal and masturbation in transvestites, comparatively little attention has been given to these nonerotic reinforcers.

Second-Order Factor Analysis

Two second-order factors emerged: For Factor I the highest loading variable from our earlier analysis was Sexual Arousal (.91); for Factor II the highest loading variable was Androallure (.57). Our interpretation of these factors is based on item content for each of these primary factors. It is clear that the dimension of sexual arousal is overwhelmingly represented in each of these secondary factors, but the factors differ in how sexual arousal is stimulated. For Factor I, which we shall identify as *transvestic autogynephilia*, the effective stimuli are thoughts and behavior associated with cross-dressing, and with the desire to imagine or visualize one's self as a woman. Conversely, we have named Factor II *autogynephilic pseudobisexuality*—that is, the enhancement of one's identity as a woman through garnering the attention, affection, or other indications of interest in one's self as a woman, by a man. We are in debt to Blanchard (1989) for his extensive original work on the concept of *autogynephilia*. We have not used the terms heterosexual or homosexual to describe the item content of the scales sharing variance to form these secondary factors because these items cannot be read, simply, in terms of partner preference. There are, however, items which allow a respondent to indicate a different strength of erotic arousal associated with stereotypically feminine stimuli or masculine stimuli; such a preference may be independent of partner preference or of the usual sex partner, although in most cases an opposite sex/gender preference is reported. Further, concerning the Androallure scale, the quest of the transgenderist to be attractive to men, and to participate in either non-sexual interpersonal processes or various erotic foreplay does not necessarily equate to a homosexual partner preference. As contradictory as this may seem for heterosexual males, some transvestites and transsexuals appear to seek the attention of men, from talk to touching, as confirmation of their worth as "women," rather than as a prelude to homosexual behavior. Once such gender and identity confirmation has been achieved, there may be little interest in pursuing actual sexual behavior with a male: hence, Blanchard's term, *pseudobisexuality* (1989). None of this reasoning takes away from the fact that there are homosexually and bisexually inclined

transvestites, and that in larger samples of transsexuals, a homosexual preference is commonly reported.

CONCLUSION

We conclude that transgender cognition and behavior should be conceptualized as complex and multidimensional, and that the five variables presented here are fundamental constituent elements of transgender thought and behavior. We did not find a single overarching variable to help account for transgender behavior. Transgenderism is most accurately conceptualized as the product of many determinants, and very likely, to be independent of sexual partner preference. As an alternative to diagnostic classification, we suggest the use of the five variables described here as a more complete approach to describing individual differences in gender experience and expression.

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